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BLOOD HURST & O' REARDON, LLP

12 **UNITED STATES DISTRICT COURT**

13 **NORTHERN DISTRICT OF CALIFORNIA – SAN JOSE DIVISION**

14 PETER MAI, on behalf of himself and all
15 others similarly situated,

16 Plaintiff,

17 v.

18 SUPERCELL OY,

19 Defendant.

Case No.

CLASS ACTION COMPLAINT

CLASS ACTION

20 **JURY TRIAL DEMANDED**

21
22
23
24
25
26
27
28

Case No.

1 “We should be very reticent of creating an experience where the outcome can be
2 influenced by spending money. *Loot boxes play on all the mechanics of gambling except*
3 *for the ability to get more money out in the end.*”

4 “Do we want to be like Las Vegas, with slot machines or do we want to be widely
5 respected as creators of products that customers can trust?”

6 “*We have businesses that profit by doing their customers harm.*”

7
8 - Tim Sweeney, Co-Founder of Epic Games

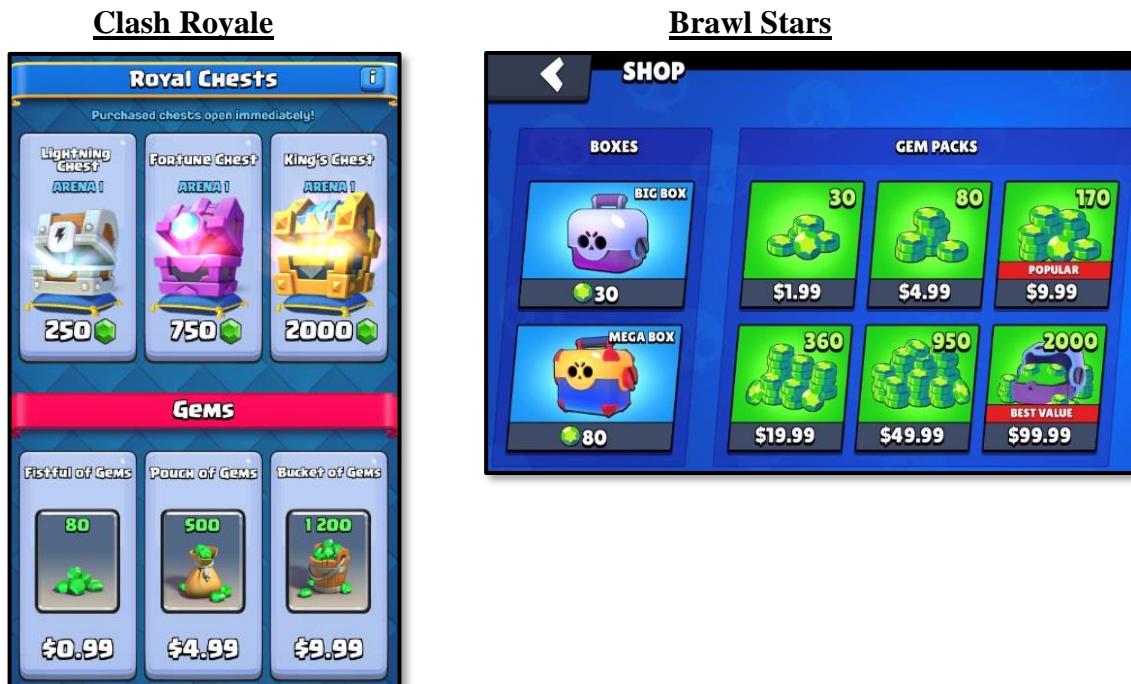
1 Plaintiff Peter Mai (“Plaintiff”) files this Class Action Complaint against Supercell Oy
 2 (“Supercell”). Plaintiff bring this action based upon personal knowledge of the facts pertaining to
 3 himself, and on information and belief as to all other matters, by and through undersigned counsel.

4 **NATURE OF THE ACTION**

5 1. The California legislature has declared: “Gambling can become addictive and is not
 6 an activity to be promoted or legitimized as entertainment for children and families.” Cal. B & P
 7 Code § 19801(c). Through its wildly popular “Clash Royale” and “Brawl Stars” video games,
 8 Supercell engages in predatory practices enticing consumers, including children and adults to
 9 engage in gambling and similar addictive conduct in violation of this and other laws designed to
 10 protect consumers and to prohibit such practices.

11 2. Not unlike Big Tobacco’s “Joe Camel” advertising campaign, Supercell relies on
 12 creating addictive behaviors to generate huge profits. Even though its games are free to initially play
 13 and download, over the last four years Defendant’s Brawl Stars and Clash Royale games have
 14 brought in over three billion dollars through in-game purchases by players.

15 3. A substantial percentage of Supercell’s huge revenues from Brawl Stars and Clash
 16 Royale come from the in-game purchases known in the gaming industry as “loot boxes.” The
 17 specific Clash Royale and Brawl Stars “Loot Boxes” look like this:



1 4. Loot Boxes are purchased using real money, but are simply randomized chances
2 within the game to win valuable players, weapons, costumes or player appearance (called “skins”),
3 or some other in-game item or feature that is designed to deliver additional value by enhancing
4 game-play and providing cosmetic value. If won, these players, weapons, skins, and other items can
5 help the gamer advance in the game and otherwise enhance the game playing experience. But buying
6 a Loot Box is a gamble, because the gamer does not know what the Loot Box actually contains until
7 it is opened.

8 5. Unsurprisingly, the perceived best “loot” in the game is also the least likely to be
9 received via the randomized Loot Boxes. Most items in the Loot Boxes tend to be “common” or
10 undesirable to the player – either because it is easily obtained or because the player already possesses
11 the item.

12 6. Some of these specific high-demand items in the game can be so difficult (and costly)
13 to obtain that a “gray market” has sprung up on the internet – websites where the game accounts
14 and in some cases individual items can be (and are) bought and sold for real money outside of the
15 game itself. While some of the “legendary” and thus, rare items are sold for hundreds of dollars, the
16 most likely and “common” Loot Box items are typically sold for a loss – less than the cost of the
17 Loot Box purchase. Numerous websites have been created to broker these transactions, bringing
18 buyer and seller together to sell these items and accounts, for real money outside of the game.

19 7. Supercell’s Loot Boxes have all the hallmarks of a Las Vegas-style slot machine,
20 including the psychological aspects to encourage and create addiction and winnings based on
21 algorithmic probabilities completely outside the player’s control. Moreover, under California law
22 they constitute illegal “slot machines or devices” when played on a mobile phone, tablet, computer,
23 or other similar device. California Penal Code § 330(d) broadly defines an unlawful “slot machine
24 or device” as,

25 a machine, apparatus, or device that is adapted, or may readily be converted, for use
26 in a way that, as a result of the insertion of any piece of money or coin or other object,
27 or by any other means, the machine or device is caused to operate or may be operated,
28 and by reason of any element of hazard or chance or of other outcome of operation
unpredictable by him or her, the user may receive or become entitled to receive any
piece of money, credit, allowance, or thing of value, or additional chance or right to

1 use the slot machine or device, or any check, slug, token, or memorandum, whether
 2 of value or otherwise, which may be exchanged for any money, credit, allowance, or
 3 thing of value, or which may be given in trade, irrespective of whether it may, apart
 4 from any element of hazard or chance or unpredictable outcome of operation, also
 sell, deliver, or present some merchandise, indication of weight, entertainment, or
 other thing of value.

5 Cal. Pen. Code § 330(b)(d).

6 8. Governments, regulators, and psychologists all agree that Loot Boxes, like the ones
 7 in Defendant's games, operate as gambling devices for those that play the game, and that they create
 8 and reinforce addictive behaviors.

9 9. For instance, the Government of Belgium examined the use of Loot Boxes in various
 10 videogames and determined that they violated that country's gambling laws, specifically finding,

11 The paid loot boxes in the examined games Overwatch, FIFA 18 and Counter-Strike:
 12 Global Offensive fit the description of a game of chance because all of the
 13 constitutive elements of gambling are present (game, wager, chance, win/loss).

14 10. Likewise, in September 2019 Great Britain Parliament's Digital, Culture, Media and
 15 Sport Committee issued a report to Parliament determining that Loot Boxes constitute gambling and
 16 encourage addictive behavior, and recommending that the sale of Loot Boxes to children should be
 17 banned. Committee Chair Damian Collins MP said:

18 Loot boxes are particularly lucrative for games companies but come at a high cost,
 19 particularly for problem gamblers, while exposing children to potential harm. Buying
 20 a loot box is playing a game of chance and it is high time the gambling laws caught
 up. We challenge the Government to explain why loot boxes should be exempt from
 the Gambling Act.

21 11. Similarly, psychologists who have studied the issue agree that Loot Boxes correlate
 22 with problem gambling among both children and adults. For example, one such published review
 23 of current studies concluded the scientific findings are "very consistent":

24 [T]he findings are very consistent that there is an association between problem
 25 gambling and loot box buying among both adolescents and adults (and that the
 association may be even stronger among adolescents).

26 12. Incorporation of Loot Boxes into videogames has become a main revenue generator
 27 in the industry. Rather than paying one time to purchase the game, players are now the source of an
 28

endless revenue stream for the companies as long as they play the game. According to one estimate, loot boxes will generate \$50 billion for the video game industry by the year 2022.¹

13. Supercell is earning huge sums from the unlawful and predatory Loot Boxes sold in its games. Supercell’s business is based mainly on its five mobile app games – each of which is free to download. Nevertheless, as a result of the sale of Loot Boxes and other in-game microtransactions, Supercell reported revenue of \$1.6 billion for 2018 and another \$1.56 billion in 2019 – a large percentage attributable to Brawl Stars and Clash Royale. For example, in June 2020, Brawl Stars (\$58 million) and Clash Royale (\$14 million) combined for 60% of Supercell’s reported \$120 million monthly revenue.²

THE PARTIES

14. Plaintiff Peter Mai is a citizen of the State of California and a resident of Santa Clara County. Since at least 2016, Plaintiff has owned and played Clash Royale, a game developed, owned, marketed, sold and distributed by Defendant Supercell. Plaintiff downloaded Defendant's Clash Royale mobile game through the Apple App Store on to his Apple iPhone mobile device. In the course of playing Clash Royale, and as a result of Defendant's conduct, Plaintiff has been induced to spend money to purchase gems for the in-game Loot Boxes. Plaintiff estimates he has spent in excess of \$150 to purchase Defendant's in-game Loot Boxes (known as "Royal Chests" in Clash Royale) in exchange for the random-chance possibility of winning valuable items. Plaintiff still owns and continues to play Clash Royale on his Apple iPhone mobile device. To the extent he plays Clash Royale and other games in the future, he will be subjected to Supercell's predatory Loot Box scheme.

15. Defendant Supercell Oy is a corporation organized under the laws of Finland, with a principal place of business at Itämerenkatu 11-13, Helsinki, Uusimaa, 00180, Finland. Supercell maintains its principal U.S. office at 555 California St., San Francisco, California, 94104. Supercell

¹ <https://www.juniperresearch.com/press/press-releases/loot-boxes-and-skins-gambling>

² <https://sensortower.com/ios/publisher/publisher/488106216>;
<https://sensortower.com/android/publisher/publisher/Supercell>

1 is a mobile video game development company whose video games include Brawl Stars and Clash
 2 Royale.

3 **JURISDICTION AND VENUE**

4 16. This Court has diversity jurisdiction over the claims asserted herein on behalf of a
 5 nationwide class pursuant to 28 U.S.C. § 1332, as amended in February 2005 by the Class Action
 6 Fairness Act. Jurisdiction is proper because:

7 (a) The proposed class includes more than 100 members and many of the class
 8 members are citizens of states that are diverse from the state of Defendant's citizenship, the amount
 9 in controversy in this class action exceeds five million dollars, exclusive of interest and costs; and,

10 (b) Defendant has purposefully availed itself of the privilege of conducting
 11 business activities within the State of California.

12 17. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1331, because a
 13 substantial part of the challenged conduct or omissions complained of herein occurred in this judicial
 14 district, and Defendant maintains its principal place of business in the United States in this judicial
 15 district.

16 **INTRADISTRICT ASSIGNMENT**

17 18. Pursuant to Civil L.R. 3-2(c) and (d), assignment to the San Jose Division is proper
 18 because a substantial part of the conduct which gives rise to Plaintiff's claims occurred in this district
 19 and specifically in Santa Clara County where Plaintiff resides.

20 **SUBSTANTIVE ALLEGATIONS**

21 **Loot Boxes Explained**

22 19. "Loot Boxes" are in-App mechanisms that provide players with randomized virtual
 23 items from a purchase.

24 20. In their paper entitled "Predatory monetization schemes in video games (e.g. 'loot
 25 boxes') and internet gaming disorder," Professors Daniel King and Paul Delfabbro provided the
 26 following description of a Loot Box:

27 A loot box refers to an in-game reward system that can be purchased repeatedly with
 28 real money to obtain a random selection of virtual items. The low probability of
 obtaining a desired item means that the player will have to purchase an indeterminate

number of loot boxes to obtain the item. Loot boxes resemble gambling slot machines because they require no player skill and have a randomly determined outcome (i.e. prize).³

21. Supercell makes its games containing Loot Boxes available for free download on Apple or Google / Android devices. Supercell uses Apple or Google to process the in-game transactions.

22. In the Supercell games, Loot Boxes are purchased by the consumer through a Google Play-linked Android device (e.g., Samsung smartphones and tablets) or through an Apple App Store-linked device (e.g., iPhones and iPads). Loot Boxes are purchased using real-world currency, usually through electronic means of a credit card number on file or by using a Google Play gift card or Apple “iTunes” gift card.

23. For example, if the player is using an Apple iPhone, while playing Defendant's games they can choose to make a purchase in the game itself. Upon pressing the button for the number of "gems" they wish to purchase (80, 500, 1200, 2500, 6500, or 14000) and then "double-clicking" the side button of the iPhone to "Pay", the amount of the purchase (\$0.99, \$4.99, \$9.99, \$19.99, \$49.99 or \$99.99) is immediately charged to the credit card number on file with the Apple App Store. There is no additional confirmation of any kind. A minor can accomplish the purchase without parental consent, or even parental knowledge.

24. To further entice consumers to spend real money on Loot Boxes, Defendant's games use a "virtual" money system within the game. That is, instead of buying Loot Boxes directly for a set dollar amount, the player must first purchase the in-game currency, which is then used to purchase Loot Boxes. In-game currencies frequently take the form of expensive-sounding items like "gems" or "gold coins" so the player feels they are getting something of value for their money.

25. For example, to purchase Loot Boxes in Clash Royale and Brawl Stars the player is required to purchase Supercell’s in-game currency known as “gems.” These gems cost real money and appear as green gems within the games. Gems are then used to purchase a “Royal Chest” or

³ King, Daniel and Delfabbro, Paul H., "Predatory monetization schemes in video games (e.g. 'loot boxes') and internet gaming disorder," *Addiction*, 2018.

1 “Brawl Box”—the names of the Loot Box style gambling mechanisms in Clash Royale and Brawl
 2 Stars, respectively.

3 Clash Royale’s Gems



3 Brawl Stars’ Gems



14 26. This intermediate level of virtual currency acquired through abnormal exchange rates
 15 is designed to reduce the salience of the real-world cost of Loot Box purchases and “disconnect” the
 16 player from the concern that real money is being gambled. The real money conversion necessary to
 17 purchase Loot Boxes has been analogized to the deception underlying casinos requiring the use of
 18 exchanged chips as its “in-game currency” because it is known players gamble “significantly more
 19 with chips than real cash.”⁴ In connection with its investigation into Loot Boxes, the Brussels
 20 Gaming Commission reached a similar conclusion about the deceptiveness of gambling with what
 21 is perceived to be virtual currency:

22 The use of points (coins) and especially their size are psychologically very
 23 sophisticated and aimed at creating a personal reality which is then disconnected from
 24 the real world. FIFA 18 teaches players to think in FUT currency and FIFA coins. . . .
 25 In Overwatch and Star Wars Battlefront II, the value of real money is also fully
 26 disconnected from the value of the in-game currency, causing players to lose contact
 27 with the real value.

28 ⁴ Xiao Leon Y. and Henderson Laura L., “Towards and Ethical Game Design Solution to Loot Boxes: a Commentary on King and Delfabbro,” *Int’l J. of Mental Health and Addiction*, 2019.

1 27. The Loot Box mechanism relies heavily on the psychology of gambling – doing
 2 everything possible to build up the player’s hoped-for win, tension, and excitement. For example,
 3 in Defendant’s games, like many others, the opening the Loot Box coincides with triumphant music,
 4 and the Loot Box itself bursting open with bright lights and colors. Yet this colorful animated system
 5 is designed to and does more often than not give the player disappointing items, and very rarely
 6 does the player get exactly the item wanted.

7 28. These Loot Boxes are designed to create a slot machine effect, where even when a
 8 player is not receiving the desired result – which happens frequently – there still exists a belief and
 9 hope that the next Loot Box will contain the desired item(s). This fact is further reinforced when
 10 viewing favorable results from other players opening Loot Boxes.⁵

11 29. One researcher described the physical experience invoked by this Loot Box
 12 mechanism:

13 Research by Kim (1998) found that waiting for the outcome of a gamble can activate
 14 the brain’s chemical reward system, releasing endorphins that create pleasure. In a
 15 gaming context, think of someone who really wants the Pharah Anubis skin in
 16 Overwatch. They buy five loot boxes and get excited during the big flashy box-
 17 opening animation. This excitement happens five times in a short space of time, with
 18 five flashy box-opening animations that are almost an event in itself.

19 30. Commenting on the Loot Box mechanism incorporated into videogames like the ones
 20 at issue here, Hawaiian congressman Chris Lee noted that Loot Boxes “***are specifically designed to
 21 exploit and manipulate the addictive nature of human psychology.***”

22 31. Loot Boxes can contain numerous items, and the contents are ranked by order of
 23 rarity and value with terms such as: “Common,” “Rare,” “Epic,” and “Legendary.”

24 32. Especially rare Loot Box items often come with long odds. For example, a
 25 “Legendary” Brawler in Brawl Stars has approximately 0.11% probability of appearing in any
 26 particular “Brawl Box.” Although there is no guarantee, obtaining a “Legendary” Brawler in Brawl
 27 Stars is a difficult task.

28 ⁵ There are thousands of videos on YouTube.com of gamers opening Loot Boxes in many
 29 different games. *See, e.g.*, video of opening Clash Royale “Legendary Chests” with over 2.3 million
 30 views at: <https://www.youtube.com/watch?v=4wc7qy7PrGg>, and a video of opening Brawl Stars
 31 “Mega Boxes” with over 2.8 million views at: <https://www.youtube.com/watch?v=nWjLPH9rAOo>.

1 Stars can mean buying hundreds of Loot Boxes at a cost of \$100 or more, based on these
 2 probabilities.⁶

3 **Brawl Stars**

4 33. Supercell released Brawl Stars worldwide in December 2018. Brawl Stars is a
 5 multiplayer online battle arena game where players battle against other players online in multiple
 6 game modes. Brawl Stars generated over \$63 million in its first month, with players in the United
 7 States reportedly contributing around 26% of that amount. Within six months Brawl Stars had
 8 generated an estimated \$275 million in player spending and 100 million installs worldwide. By the
 9 end of its first year, Brawl Stars generated \$420 million in revenue.

10 34. Brawl Stars is age-rated “9+” by Apple and “Everyone 10+” by Google.

11 35. Brawl Stars players can unlock different brawlers and play against each other (or the
 12 computer). Each brawler has its own unique offensive or defensive abilities, and own “power levels”
 13 and “rarity” ratings. Due to the competitive nature of the game, players want the most rare and best
 14 level brawlers to increase their chances of winning in the game.

15 36. Players can obtain new brawlers by opening Brawl Boxes (the game’s version of a
 16 Loot Box). Brawl Boxes are purchased in game using the in-game currency “Gems.” Gems can be
 17 earned through game play in small amounts or purchased in the game’s “store” with real money in
 18 varying amounts and prices. For example, a “fistful of Gems” is 30 Gems and costs \$1.99, a “pouch”
 19 of 80 gems is \$4.99, and a “crate full” of 950 Gems will cost \$49.99.

20 37. Loot Boxes may also be purchased in varying amounts and prices. A “Big Box” is
 21 the equivalent of 3 “Brawl Boxes,” and costs 30 Gems. “Mega Boxes” cost 80 Gems each and are
 22 the equivalent of 10 regular Brawl Boxes.

23 38. The odds of obtaining certain items in the Brawl Boxes are largely unknown to
 24 gamers and often abysmal in reality. The best brawler in the game – and therefore the most valued
 25 and rare – is called a “Legendary Brawler”. While the chances of receiving items in a Brawl Box

27 ⁶ The probability of receiving a specific item from a Loot Box is referred to as the “drop rate.”
 28 Each Brawl Box provides 3 random draws, and each random draw has the same drop rate of
 approximately 0.1%.

1 constantly changes, “opening” any given Brawl Box usually results in approximately a 0.3% chance
 2 of receiving a Legendary Brawler.

3 39. In order to incentivize players to open more and more Brawl Boxes, Brawl Stars
 4 employs an algorithm to slightly increase the odds of receiving a Legendary Brawler each time the
 5 player opens a Brawl Box. This feature entices players to purchase additional Brawl Boxes as the
 6 player sees his/her chances improve, and works in tandem with the player’s understanding that
 7 he/she has already spent a certain amount of money to obtain that better chance of receiving the
 8 Legendary Brawler.

9 40. Supercell continues to market and sell Brawl Stars and its in-game Loot Boxes to
 10 consumers throughout the United States.

11 **Clash Royale**

12 41. Clash Royale is a real-time multiplayer battle game where players build their own
 13 battle communities and command their characters to take down opponent’s towers all while
 14 defending their own. The player who destroys their opponent’s towers first is the winner.

15 42. Supercell released Clash Royale worldwide on March 2, 2016. Clash Royale was the
 16 top grossing game in its first month (\$80 million), and in less than a year on the market Clash Royale
 17 reached \$1 billion in revenue. As of October 2018, Clash Royale had amassed an estimated \$2.3
 18 billion in worldwide gross revenue and 354 million all-time downloads. Four and a half years after
 19 its release, Clash Royale is currently ranked the #9 Strategy game on Apple’s App Store and still
 20 generates over \$10 million a month in revenue.

21 43. Clash Royale is age-rated in the Google Play store as “E” for “Everyone 10+” and
 22 Apple’s App Store age-rates Clash Royale as appropriate for “9+”.

23 44. Clash Royale is a loot-box based game where new and better characters, spells and
 24 buildings are obtained by buying “gems” (purchased with real-world money), which are in turn used
 25 to open the different “Royal Chests.” These Royal Chests, which contain randomized items of
 26 different “levels” and “rarity” scores are purchased with different amounts of gems, include the
 27 “Lightning Chest,” “Fortune Chest,” “King’s Chest,” and “Legendary’s King Chest.” These Royal
 28 Chests are the in-game Loot Boxes that offer random items of value, including characters, spells

1 and buildings. The best items – known as the “Legendary” characters, spells and buildings – are the
 2 most rare and difficult to get when opening a Loot Box.

3 45. A mobile app game developer described how Supercell designed the Loot Box
 4 mechanics in Clash Royale to be so addicting and effective at driving “long-term retention” of
 5 players:

6 Drops are important because the ultimate goal in free to play games is to maximise
 7 long-term retention and maximise the cap of the economy. To drive strong long-term
 8 retention, players need to have a long lasting sustained desire to pull from the Gacha.
 The more drops this takes, the longer the system will last....

9 Even thinking about maximising a single legendary card can show you that it takes
 10 a lot of drops. It’s reported that Supercell drops 1 legendary card 0.43% of the time
 11 in their gold level chests. If we use this as a base, and a pool of 6 legendary cards,
 12 that leaves the % of dropping your chosen legendary to be 0.0716%. In order to
 upgrade this card fully, you need 37 drops of this card. So, on average, a player will
 need over 50,000 drops before their single legendary card is fully upgraded. That’s
 a system that LASTS.⁷

13 46. The “free-to-play” business model of Supercell’s games is deceptively designed by
 14 Supercell to encourage spending and gambling by using game mechanics that create and exploit
 15 dissatisfaction and urgency unless money is spent on in-game items and Loot Boxes. Drs. Hamari
 16 et al. studied what drives consumers to purchase in-game items within these so-called “freemium”
 17 games. One of the strategies of freemium game developers “has been to increase the desirability of
 18 additional products by intentionally increasing the frustration experienced with the free core
 19 service.” This strategy of monetizing free-to-play games by creating “demand through
 20 inconvenience” includes “employ[ing] gambling-like sale tactics (i.e., gamblification) to persuade
 21 users to purchase premium products.”⁸

22
 23
 24
 25 7 Adam Telfer, “Brawl Stars vs Clash Royale: Designing a Strong Gacha,” available at
 26 <https://mobilefreetoplay.com/brawl-stars-vs-clash-royale-designing-gacha/>. “Drops” refers to
 27 opening the individual, randomized rewards in Loot Boxes, and “gacha” is another name for Loot
 28 Boxes.

29 8 Hamari J, Hanner N, & Koivisto J, “*Why pay premium in freemium services?*” *A study on*
 30 *perceived value, continued use and purchase intentions in free-to-play games*, International J of
 31 Information Management, 51:102040 (2020).

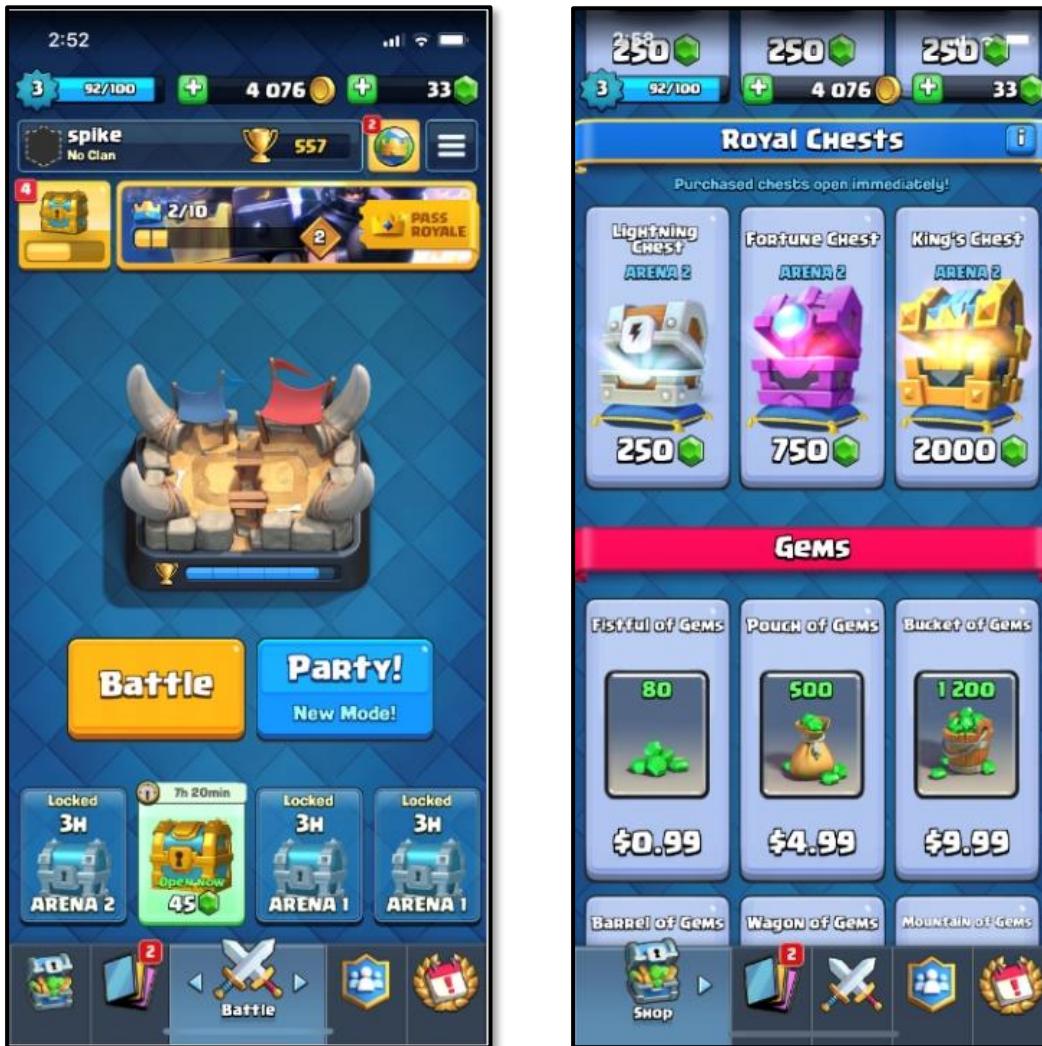
1 47. For example, in Clash Royale, a limited number of Loot Boxes may be earned by
 2 defeating an opponent. However, Supercell designs the game so that players must wait a number of
 3 hours (up to 24 hours) to open a single Loot Box, and only one Loot Box may be unlocked at a time.
 4 To speed up the unlocking (i.e., opening) of the randomized Loot Box, Supercell entices players to
 5 buy and use gems to “Open Now.” And in Brawl Stars, Supercell creates additional urgency by
 6 offering “deals” on Loot Box purchases for limited time periods, going so far as to set a “timer” in
 7 the player’s account for when the “deal” will expire. Thus, Supercell has created a “demand through
 8 inconvenience” system to drive consumers to purchase gems necessary to gamble and open the Loot
 9 Boxes that players “earn” but cannot freely open.

10 48. Supercell creates additional inconvenience and incentive to spend and gamble by
 11 only allowing a player to have four Loot Boxes at one time – and only one of these found can be in
 12 the midst of the lengthy unlocking process. Thus, while a Loot Box may be technically “earned”
 13 when a player defeats an opponent in a battle, when a player’s four “chest slots” are already filled,
 14 an additional Loot Box cannot be earned.

15 49. Hamari et al. stated the “core idea of the freemium business model is often to impair
 16 the use of the free service through designed inconveniences, i.e., to reduce the enjoyment in order
 17 to entice users to purchase premium services or features that eliminate the obstacles of the freemium
 18 version.”⁹ To illustrate some of the ways in which Supercell purposefully impairs the free aspects
 19 of Clash Royale to entice spending and gambling, below is a screenshot of a player profile. The
 20 player possesses four Loot Boxes. Only one of the four may be in the process of being “unlocked”
 21 and no other Loot Boxes may be won in battles until one of the four is opened. The player has started
 22 the process of unlocking a “Golden Chest.” This “Golden Chest” will open automatically after 7
 23 hours and 20 minutes. Or 45 gems may be used to “Open Now” the Golden Chest to reveal its
 24 randomized items. Because the player has only 33 gems another 12 must be purchased (using real-
 25 money) if the player wants to avoid the wait time. As depicted in the second screenshot, the player

27 9 Hamari J, Hanner N, & Koivisto J, “*Why pay premium in freemium services?*” *A study on*
 28 *perceived value, continued use and purchase intentions in free-to-play games*, *International J of*
Information Management, 51:102040 (2020).

1 could also purchase gems to use to immediately open a distinct Loot Box (e.g., to purchase and
 2 immediately open a “King’s Chest” for 2,000 gems at a cost that exceeds \$9.99).



20 50. Supercell continues to market and sell Clash Royale and its in-game Loot Boxes to
 21 consumers throughout the United States.

22 **Loot Boxes Create Addictive Behaviors Akin to Gambling Addiction**

23 51. Psychologists call the principle by which Loot Boxes work on the human mind,
 24 “variable rate enforcement.” This kind of reward structure underpins many forms of gambling. It
 25 results in people quickly acquiring behaviors and repeating these behaviors frequently in hopes of
 26 receiving a reward. Dopamine cells are most active when there is maximum uncertainty, and
 27 dopamine system responds more to an uncertain reward than if the same reward delivered on a
 28 predictable basis.

1 52. For numerous reasons minors, and adolescents in particular, are especially vulnerable
 2 to this type of manipulation. By some estimates, teenage gambling is the fastest rising gambling
 3 addiction. “Teenage gambling, like alcohol and drug abuse in the 1930s, is the fastest growing
 4 addiction.”

5 53. First, adolescents have low impulse control. The teenage brain is still developing; the
 6 part of the brain that’s responsible for good impulse control and decision making is not fully
 7 developed. Dr. Frances Jensen, the chair of the department of neurology at the University of
 8 Pennsylvania Perelman School of Medicine and formally Harvard professor and director of
 9 neuroscience at Boston’s Children’s Hospital, explains it as follows: “their frontal lobes are there.
 10 They’re there and they’re built. They’re just not accessed in as rapid a manner because the insulation
 11 to the wiring to them isn’t fully developed, so the signals go more slowly. Hence, teenagers are not
 12 as readily able to access their frontal lobe to say, oh, I better not do this. An adult is much more
 13 likely to control impulses or weigh out different factors in decisions, where a teenager may not
 14 actually have full on-line, in-the-moment capacity.” Dr. Frances Jensen, *Why Teens are Impulsive-
 15 Prone and Should Protect Their Brains*, NPR (Jan. 28, 2015). Adolescence is a developmental
 16 period characterized by suboptimal decisions and actions. Casey et al., *The Adolescent Brain*,
 17 Annals of the New York Academy of Sciences, 1124(1):111–126 (2008). During this time, impulse
 18 control is still relatively immature. *Id.*

19 54. Second, adolescents are more inclined to engage in risk-taking behaviors and risky
 20 decision making than are adults. Gardener M & Steinberg L, *Peer influence on risk taking, risk
 21 preference, and risky decision making in adolescence and adulthood: an experimental study*,
 22 *Developmental Psychology*, 41:625-635 (2005). Adolescents and young adults are more inclined to
 23 risk taking because development of executive brain function and appreciation of risk is continuing
 24 in this period. Kelley et al., *Risk taking and novelty seeking in adolescence: Introduction to Part I*,
 25 Annals of the New York Academy of Sciences, 1021(1): 27-32 (2004); Steinberg L, *Cognitive and
 26 affective development in adolescence*, *Trends in Cognitive Sciences*, 9(2):69-74 (2005).

27 55. Third, not only are adolescents more likely to take risks, but they are also more prone
 28 to addiction. “They build a reward circuit around that substance to a much stronger, harder, longer,

1 stronger addiction. That is an important fact for an adolescent to know about themselves - that they
 2 can get addicted faster." Dr. Frances Jensen, *Why Teens are Impulsive- Prone and Should Protect*
 3 *Their Brains*, NPR (Jan. 28, 2015).

4 56. Last, children and adolescents often lack a critical understanding of money and
 5 financial management. Approximately one in four students in the 15 countries and economies that
 6 took part in the latest OECD Programme for International Student Assessment (PISA) test of
 7 financial literacy are unable to make even simple decisions on everyday spending, while only one
 8 in ten can understand complex issues, such as income tax. OECD, *PISA 2015 Results (Volume IV);*
 9 *Students' Financial Literacy*, PISA, OECD Publishing, Paris (2017).

10 57. As set forth in detail above, purchasing and opening a Loot Box – by design – is
 11 visually, physically, and aurally stimulating. Opening a Loot Box gives the player a rush; the
 12 moment of anticipation followed by release. The Loot Box mechanism has been proven to be
 13 effective on adults, and its effects are only intensified when used on minors who are more prone to
 14 engage in risk-taking behaviors, more prone to gambling addiction, and "are less equipped to
 15 critically appraise the value proposition of these schemes."

16 58. In fact, virtually every study published to date on the connection between Loot Boxes
 17 and gambling has found an association:

18 "Given all everything we know about the similarities between boxes and slot
 19 machines, it would actually be astounding and surprising were there not such a
 connection. They are, in many ways, so closely related."¹⁰

20 59. Dan Trolaro, the Assistant Executive Director of the Council on Compulsive
 21 Gambling of New Jersey, explained, "The mechanics within a loot box look and feel like a gamble.
 22 Once minors are exposed to game of chance mechanisms, there is a significantly higher risk that
 23 they will have problems with it at a later stage in their lives. The literature indicates that exposure
 24 at an early age increases the risk of addiction and the severity of the addiction."

25
 26
 27
 28 ¹⁰ Keith Whyte, Executive Director of the National Council On Problem Gambling, *Inside the Game: Unlocking the Consumer Issues Surrounding Loot Boxes*. An FTC Workshop (Aug. 7, 2019).

1 60. Other experts agree. For example, the mental health director of the UK's National
 2 Health Service summarized their studies by declaring that the gaming industry is "setting kids up
 3 for addiction by teaching them to gamble." According to Keith Whyte, the Executive Director of
 4 the National Council On Problem Gambling, "Those who play loot boxes, may well be on their way
 5 to developing gambling problems due to their loot box play."

6 61. Peer-reviewed empirical research bears this out. For example, Drs. Zendle, Meyer
 7 and Over (2019) examined the relationship between Loot Box buying and problem gambling in a
 8 survey of 1,115 adolescents aged 16-18 years. They reported that "loot boxes either cause problem
 9 gambling among older adolescents, allow game companies to profit from adolescents with gambling
 10 problems for massive monetary rewards, or both."¹¹

11 62. Zendle and Cairns (2018) reports the findings from their scientific survey of 7,422
 12 gamers aged 18 or older. The researchers measured both how much these gamers spent on loot boxes
 13 and the severity of their problem gambling in order to "establish[] both the existence, the size, and
 14 the importance of links between purchasing loot boxes and problem gambling." Drs. Zendle and
 15 Cairns concluded their research "provides empirical evidence of a relationship between loot box use
 16 and problem gambling. The relationship seen here was neither small, nor trivial. It was stronger than
 17 previously observed relationships between problem gambling and factors like alcohol abuse, drug
 18 use, and depression." The relationship between other types of microtransactions and problem
 19 gambling was not as strong, indicating a specific roll of loot boxes in this association. The
 20 researchers also observed that "[d]ue to the formal features that loot boxes share with other forms
 21 of gambling, they may be acting as a 'gateway' to problem gambling amongst gamers."¹²

22 63. Zendle and Cairns' 2019 peer-reviewed paper titled "Loot boxes are again linked to
 23 problem gambling: Results of a replication study," discussed results of a survey that assessed the
 24 replicability of their survey results published in 2018 (discussed in Paragraph 62 above). The 2019

26

¹¹ Zendle et al., *Adolescents and loot boxes: links with problem gambling and motivations for purchase*, Royal Society Open Science, 6(6):190049 (June 2019).

27 ¹² David Zendle & Paul Cairns, *Video game loot boxes are linked to problem gambling: Results of a large-scale survey*, PLoS ONE, 13(11):e0206767 (2018).

1 paper analyzed the researchers' large-scale survey of 1,172 gamers aged 18 and older. Drs. Zendle
 2 and Cairns observed "Loot boxes share psychological and structural features with gambling," that
 3 there was again a "significant link" between problem gambling and loot box spending, and "the
 4 severity of the link seen here suggests that relevant authorities should seriously consider restricting
 5 access to loot boxes as if they were a form of gambling."¹³

6 64. Brooks and Clark (2019) found that risky loot box use is associated with increased
 7 problem gambling symptoms and gambling related cognitions. Drs. Brooks and Clark studied the
 8 relationships between gaming involvement, engagement with loot boxes, and their associations with
 9 disordered gambling and gambling-related cognitions. In doing so, the researchers conducted two
 10 different surveys: one involving 144 adults and the other of 113 undergraduate students. According
 11 to the authors, the survey results "demonstrate that besides the surface similarity of loot boxes to
 12 gambling, loot box engagement is correlated with gambling beliefs and problematic gaming
 13 behaviour in adult gamers."¹⁴

14 65. Similarly, in their 2019 peer-reviewed paper, Dr. Wen Li and co-authors from the
 15 Center for Gambling Studies at Rutgers University found an association between problem gambling
 16 symptoms and loot box spending, problem gaming symptoms and loot box purchasing, and loot box
 17 purchasing and psychological distress. The researchers collected data from 618 adult video gamers
 18 via an online survey to explore the relationship between loot box purchases and problem video
 19 gaming and gambling behaviors. Drs. Li et al. observed that "[t]he advent of loot box purchasing in
 20 video games has effectively introduced gambling into the video gaming environment" and
 21 concluded "loot box purchasing was directly related to increased problem video gaming and
 22 problem gambling severity" and "loot box purchases may also be indirectly related to mental distress
 23 due to its association with problem video gaming and problem gambling behavior."¹⁵

24
 25 ¹³ David Zendle & Paul Cairns, *Loot boxes are again linked to problem gambling: Results of a replication study*, PLoS ONE, 14(3):e0213194 (2019).

26 ¹⁴ Gabriel A. Brooks & Luke Clark, *Associations between loot box use, problematic gaming and gambling, and gambling-related cognitions*, Addictive Behaviors, 96:26-34 (2019).

27 ¹⁵ Li et al., *The relationship of loot box purchases to problem video gaming and problem gambling*, Addictive Behaviors, 97:27-34 (2019).

1 66. Profs. Macey and Hamari (2018), who conducted a survey and found “evidence of a
 2 strong relationship between loot box opening (paid and unpaid) and gambling,” commented that “a
 3 real-world analogue [of loot boxes] are lottery scratch cards.”¹⁶

4 **Some Countries Have Banned Loot Boxes For Violating Gambling Laws**

5 67. During the last two years, some countries have banned Loot Boxes (Belgium,
 6 Netherlands, Japan), while regulators in others report current investigations, including in Australia
 7 where a 2018 report concluded Loot Boxes are “psychologically akin to gambling,” and in the
 8 United Kingdom where a July 2020 report from the House of Lords urged the government to
 9 immediately “bring loot boxes within the remit of gambling legislation and regulation.” Similarly,
 10 lawmakers in Hawaii, Minnesota and Washington introduced state legislation to ban Loot Boxes in
 11 videogames.

12 68. For instance, in the study completed in Belgium, the regulators looked at Loot Boxes
 13 in a variety of videogames and determined that they fit the description of a game of chance because
 14 all the elements of gambling are present, specifically finding:

15 The paid loot boxes in the examined games Overwatch, FIFA 18 and Counter-Strike:
 16 Global Offensive fit the description of a game of chance because all of the
 17 constitutive elements of gambling are present (game, wager, chance, win/loss).

18 69. Likewise, government officials in the Netherlands studied loot boxes in ten popular
 19 games. In its April 2018 report, the Netherlands Gaming Authority determined some Loot Boxes
 20 had elements similar to slot machines, and addiction potential similar to blackjack, roulette and
 21 bingo. According to the official report, “all of the loot boxes that were studied could be addictive,”
 22 “loot boxes have a moderate to high addiction risk potential,” some “have integral elements that are
 23 similar to slot machines” complete with “multiple visual and sound effects are added and a ‘near
 24 miss’ effect is used,” and “as a result of opening loot boxes, socially vulnerable groups such as
 25 young people could eventually be encouraged to play other games of chance.” Noting that all the
 26

27 ¹⁶ Joseph Macey & Juho Hamari, *eSports, skins and loot boxes: Participants, practices and*
 28 *problematic behavior associated with emergent forms of gambling*, *New Media & Society*,
 21(1):42-59 (2019).

1 Loot Boxes could “foster the development of addiction,” the report from the Netherlands Gaming
 2 Authority also observed the value gamers place on the virtual items within Loot Boxes:

3 A significant characteristic of many of these online games of skill is that a certain
 4 status is gained from playing the game and/or the external in-game characteristics of
 5 the player. Obtaining in-game goods from a loot box could have an effect on how
 6 other players in the game value the player.¹⁷

7 60. Australian officials also determined the Loot Box mechanism constitutes a form of
 8 gambling that targets minors and otherwise acts “as a gateway to problem gambling and associated
 9 harm later in life.” Accordingly, the March 2020 report prepared by the Australian House of
 10 Representatives Standing Committee on Social Policy and Legal recommended mandatory age
 11 verification for Loot Box purchasing:

12 Given their resemblance to gambling, the Committee considers that loot boxes and
 13 other simulated gambling elements in video games should be subject to appropriate
 14 age restrictions, including through the use of mandatory age verification.¹⁸

15 71. The March 2020 Australian report was preceded by an October 2019 report from the
 16 Australian Gambling Research Centre finding “the use of ‘loot boxes’ or micro-transactions for
 17 chance-based items in online video games [is] a form of gambling that is readily accessible to players
 18 under the age of 18 years.” This 2019 Australian report also found the presence of Loot Boxes in
 19 video games “normalizes gambling”:

20 The use of for-money, in-game ‘loot boxes’ as a mechanism through which
 21 additional in-game items can be obtained familiarises players, many of whom are
 22 less than 18 years of age, with a gambling activity that is practically identical to
 23 games available on external sites. It coexists there with lotteries, eSports betting and
 24 other more explicit gambling activities played in virtual currency. This process of
 25 ‘gamblification’ can be seen as analogous to that occurring in the context of sports
 26 betting, whereby gambling practices are becoming increasingly normalised as an

27 17 Netherlands Gaming Authority (Kansspelautoriteit), *Study into loot boxes: A treasure or a
 28 burden?* (Apr. 10, 2018), available at <https://kansspelautoriteit.nl/english/loot-boxes/>.

29 18 Parliament of the Commonwealth of Australia, House of Representatives Standing
 30 Committee on Social Policy and Legal Affairs, *Protecting the age of innocence: Report of the
 31 inquiry into age verification for online wagering and online pornography* (Feb. 2020), available at
 32 [https://parlinfo.aph.gov.au/parlInfo/download/committees/reportrep/024436/toc_pdf/Protectingthe
 34 ageofinnocence.pdf](https://parlinfo.aph.gov.au/parlInfo/download/committees/reportrep/024436/toc_pdf/Protectingthe

 33 ageofinnocence.pdf).

1 inherent component of sports engagement (Jenkinson, de Lacy-Vawdon, & Carroll,
 2 2018; Lopez-Gonzalez & Griffiths, 2016).¹⁹

3 72. On July 2, 2020, nine months after the UK's Department of Digital, Culture, Media
 4 and Sport concluded that Loot Boxes should be regulated under the UK's gambling laws, the House
 5 of Lords called for the immediate regulation of loot boxes as gambling: "While we welcome the
 6 government's intention to consider the relationship between gambling and video gaming, we believe
 7 that this issue requires more urgent attention." The House of Lords' report noted the "evidence we
 8 have heard has stressed the urgency of taking action." According, the House of Lords "echo the
 9 conclusion of the [UK's] Children's Commissioner's report, that if a product looks like gambling
 10 and feels like gambling, it should be regulated as gambling" and therefore recommended that loot
 11 boxes be immediately deemed gambling.²⁰

12 73. Here in the United States, the Federal Trade Commission recently hosted a workshop
 13 on Loot Boxes and U.S. Senators Maggie Hassan (D-NH)), and Josh Hawley (R-MO) introduced a
 14 bill co-sponsored by Ed Markey (D-MA) and Richard Blumenthal (D-CT) titled "The Protecting
 15 Children From Abusive Games Act" that would prohibit Loot Boxes in minor-oriented games. The
 16 proposed bill includes a prohibition in minor-oriented games of Loot Boxes, which it defines as "an
 17 add-on transaction to an interactive digital entertainment product that in a randomized or partially
 18 randomized fashion unlocks a feature of the product or adds to or enhances the entertainment value
 19 of the product[.]"

20 **Clash Royale and Brawl Stars are Age-Rated for Children as Young as 9 Years Old,
 21 But Do Not Disclose Gambling or the Loot Box Mechanism**

22 74. Videogame content rating systems are used by video game developers and platform
 23 providers to classify individual games into suitability-related groups organized by age ranges based

24 ¹⁹ Uma Jatkar & Rebecca Jenkinson, *House of Representatives Standing Committee on Social
 25 Policy and Legal Affairs: Submission to the Inquiry into Age Verification for Online Wagering and
 26 Online Pornography*, Australian Gambling Research Center, Australian Institute of Family Studies
 (Oct. 25, 2019).

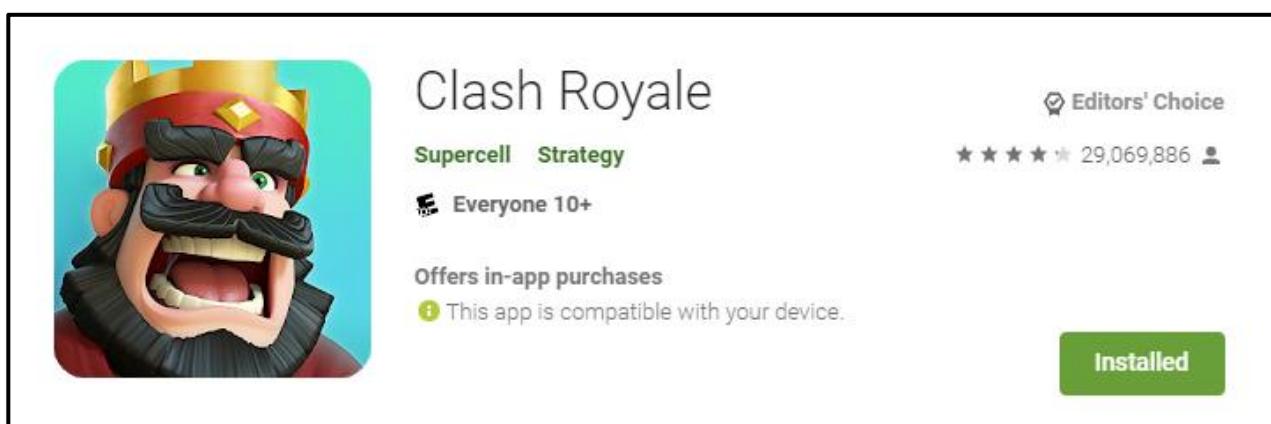
27 ²⁰ The full report titled "Gambling Harm—Time for Action (July 2, 2020)" from the House of
 28 Lords Select Committee on the Social and Economic Impact of the Gambling Industry is available
 at <https://publications.parliament.uk/pa/ld5801/ldselect/ldgamb/79/79.pdf>.

1 on the game's content relating to substances (alcohol, tobacco, or drugs), blood and gore, violence,
 2 mature and crude humor, profane language, depictions of nudity, real or simulated gambling, and
 3 sexual content or themes. One of the primary reasons for these ratings is to inform consumers,
 4 especially parents, of potentially objectionable content within a game.

5 75. In the United States, much of the videogame industry "self-regulates" through the
 6 Entertainment Software Ratings Board ("ESRB"). ESRB ratings are based on a content rating
 7 questionnaire completed by the game developer. Developers, including Supercell, have the ability
 8 to appeal the rating assigned by ESRB. According to the ESRB, age ratings are provided so parents
 9 can choose age-appropriate games for their children:

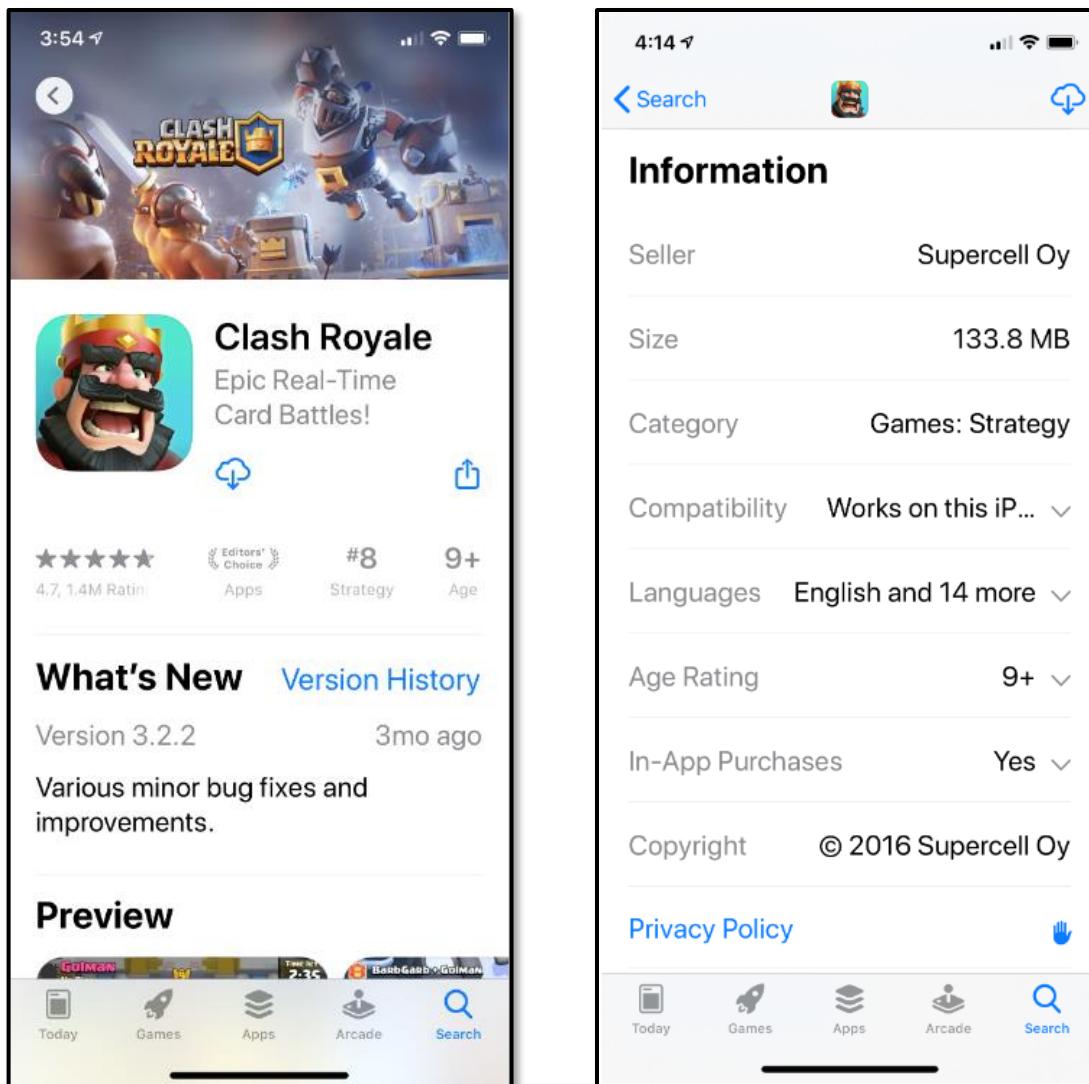
10 ESRB ratings provide information about what's in a game or app so parents and
 11 consumers can make informed choices about which games are right for their family.
 12 Ratings have 3 parts: Rating Categories, Content Descriptors, and Interactive
 13 Elements.

14 76. Since 2015, Google has provided ESRB-based age-ratings for games available to
 15 download in its Google Play store. Notably, Google's ratings do *not* contain any disclosures
 16 concerning the use of Loot Boxes or gambling. Instead, the only disclosure available is the vague
 17 and generic statement that a game "Offers in-app purchases." As an example, below is a screen shot
 18 of Google Play's disclosures concerning Clash Royale²¹:



28²¹ https://play.google.com/store/apps/details?id=com.supercell.clashroyale&hl=en_US

1 77. Apple does not ascribe to the ESRB ratings system. Instead, Apple has created its
 2 own ratings categories for games available to download in its App Store. The Apple App Store age
 3 ratings are set by the game developer.²² Apple's ratings also do not contain any disclosures
 4 concerning gambling or the use of Loot Boxes. Instead, the only disclosure (seen only when
 5 scrolling down within the App download screen) is the vague and generic statement a game has "In-
 6 App Purchases." If the developer age rates its game "9+" or lower it can be included in the Kids
 7 category of gaming apps in the App Store. As an example, below is a screen shot of the App Store's
 8 disclosures concerning Clash Royale:



27 22 <https://help.apple.com/app-store-connect/#/dev599d50efb> (Apple's webpage states the
 28 developer is "required to set an age rating for your app.").

1 78. Within its “Parent’s Guide” on Supercell’s website, Supercell states “[t]hings like
 2 age limits, in-app purchases, and privacy are all very valid concerns” and “before you or your child
 3 download our games, you should be given upfront information about the game’s content.” While on
 4 its website, Supercell states users of its game should be at least 13 years of age, Supercell is
 5 responsible for the lower Apple and Google age ratings for its games and/or has failed to ensure
 6 Apple and Google set higher age ratings for Clash Royale and Brawl Stars. Supercell’s age rating
 7 and Parents Guide do not contain any disclosures concerning in-game gambling or the use of Loot
 8 Boxes.²³

9 79. Thus, there is no notice – and no requirement of any notice by Supercell, Apple or
 10 Google – to the parent and/or gamer that a game contains Loot Box gambling mechanisms.

11 **Loot Boxes Constitute Gambling in Violation of California Law**

12 80. Loot Boxes are a form of gambling and violate California’s anti-gambling laws.
 13 According to the California Bureau of Gambling Control, by paying for and opening Loot Boxes
 14 within the game, the game is creating a “gambling device.” It states:

15 California’s gambling device statutes are broad in their coverage and prohibit any
 16 person from owning, renting, or possessing illegal gambling devices. (Penal Code,
 17 §§ 330a, 330b, 330.1.) An illegal gambling device has three features:

- 1 1. It is a machine, apparatus, or device (coin operation is not required);
- 2 2. Something of value is given to play the device; and
- 3 3. The player has the opportunity to receive something of value by any
 element of hazard or chance (“something of value” is not limited to
 coins, bills, or tokens—it also includes free replays, additional
 playing time, redemption tickets, gift cards, game credits, or anything
 else with a value, monetary or otherwise.) (Penal Code, §§ 330a, 330b
 & 330.1.)

23 81. None of these elements can be in dispute: a player uses his Apple or Android
 24 smartphone or tablet with the downloaded game on it (#1); the player pays real-world currency for
 25 the opportunity to open a Loot Box (#2); and the Loot Box is a randomized chance to obtain
 26 something of value (#3).

27

28 ²³ <https://supercell.com/en/parents/>

1 82. The randomized virtual items that may be won by purchasing and opening a Loot
 2 Box have value. Research demonstrates that “[i]n general, [] virtual items are valued for many of
 3 the same reasons as more tangible commodities.” Nevertheless, because “the symbolic value of a
 4 virtual good stems from its role and meaning inside the game...A person not part of that social world
 5 would probably not see the good as valuable at all.”²⁴ Indeed, there would be no incentive to acquire
 6 or offer Loot Box items, including cosmetics if they did not have some sort of value to the player.

7 83. Economic theories almost all assert market price as the best indicator of value.
 8 Evidence of the real-world value of the randomized Loot Box items includes that where these virtual
 9 items are tradeable for real-world money, substantial transactions of real currency have occurred.
 10 Furthermore, most virtual items are sold for less than the cost of a Loot Box (representing real
 11 financial loss), refuting the assertion that no player who opens a Loot Box makes a loss. Likewise,
 12 gamers who purchase virtual items also spend significantly more in total on games demonstrating a
 13 willingness to spend additional money acquiring virtual items and the additional financial value of
 14 these items over and above the game itself.²⁵ Likewise, in games such as Clash Royale and Brawl
 15 Stars where the items contained in Loot Boxes are categorized by frequency and rarity, value is
 16 inherently assigned to the items. Moreover, the collection of rare items is seen as a sign of status
 17 within the gaming community, thus ascribing a form of social value to the items.²⁶

19 24 Vili Lehdonvirta, *Virtual item sales as a revenue model: identifying attributes that drive*
 20 *purchase decisions*, Electron Commer Res, 9:97-113 (2009).

21 25 Drummond et al., *Why loot boxes could be regulated as gambling*, Nature Human Behavior,
 22 DOI 10.1038/s41562-020-0900-3 (2019). Drummond and co-authors analyzed sales of 2,319 virtual
 23 items from three popular games. In the aggregate, sales of the virtual items exceeded one billion
 24 dollars, with the individual items being sold for between \$0.03 and \$743.80 each. “Contradicting
 25 the common argument that loot boxes are not gambling because no player loses upon opening a loot
 26 box” the “overwhelming majority of players incur financial losses when on-selling loot box items,
 27 with ~93% of sales recouping less than the purchase price.”

28 26 For instance, Dr. Vili Lehdonvirta, an economic sociologist, professor at the University of
 29 Oxford and former game developer, points out that in the game *Ultima Online*, “one of the most
 30 highly valued virtual items in the whole system was a small brown lump named ‘horse dung’.
 31 Despite its very modest appearance and complete lack of performance or functionality, people have
 32 paid the equivalent of hundreds of U.S. dollars for the item.” Vili Lehdonvirta, *Virtual item sales as*
 33 *a revenue model: identifying attributes that drive purchase decisions*, Electron Commer Res, 9:97-
 34 113 (2009).

1 84. Professors Drummond, Sauer, Hall, Zendle and Loudon specifically analyzed
 2 whether the virtual items that may be won from randomized Loot Boxes have real-world monetary
 3 value. In their 2020 paper published in the top-tier journal *Nature*, Drummond et al. determined that
 4 Loot Boxes have value using numerous economic theories. The authors concluded:

5 We have demonstrated that virtual items have monetary value to gamers irrespective
 6 of whether they can be cashed out. Therefore, randomised virtual items (loot boxes)
 7 purchased for real money likely satisfy the requirements of value needed to meet the
 legal definitions of gambling in many jurisdictions.²⁷

8 85. In fact, there are markets outside of the games themselves where real money is paid
 9 for singular virtual items or entire player accounts. The value, or price, of each game account is
 10 determined by the “Loot” the player possesses in the account. There is even a selection of online
 11 companies, including playerup.com who claim to specialize in buying and selling these videogame
 12 accounts.²⁸

13 86. Whether the potential Loot Box items make playing the game easier and more
 14 winnable (“functional” items) or allow players to customize the look of their in-game characters
 15 (“cosmetic” items), all Loot Boxes provide a completely randomized chance to win valuable items.
 16 For example, Hamari et al. (2017) observed the value of in-game items that may be obtained to
 17 “personalize” video game characters: “One prominent value proposition of a lot of in-game content
 18 is that it affords players to differentiate themselves from other players by personalizing their avatar
 19 or other belonging in-game.”²⁹ Lehdonvirta (2009) also observed that both functional and cosmetic
 20 attributes of virtual goods drive consumers’ purchase decisions. “It could even be speculated that in
 21 some cases the functional attributes of a virtual good serve only as an excuse for a purchase that is

23 27 Drummond et al., *Why loot boxes could be regulated as gambling*, *Nature Human Behavior*,
 24 DOI 10.1038/s41562-020-0900-3 (2019).

25 28 *Getting Started: About Us*, PLAYERUP, <https://www.playerup.com/support-tickets/knowledge-base/getting-started-about-us.33/> (last visited Aug. 3, 2020) (“PlayerUp is a free
 26 online platform for players of massive multiplayer online (MMO) games to buy, sell, and trade
 27 digital accounts.”).

28 29 Hamari J, Alha K, Järvelä S, Kivikangas JM, Koivisto J, & Paavilainen J, *Why do players
 29 buy in-game content? An empirical study on concrete purchase motivations*, *Computers in Human
 Behavior*, 68:538-546 (2017).

1 primarily motivated by hedonic or social aspects, a technique commonly applied in marketing high-
 2 performance automobiles.”³⁰

3 87. Because of scarcity bias (i.e., humans place a higher value on an object that is scarce),
 4 players gamble money to open Loot Boxes hoping they can win the “rare” or “legendary” Loot Box
 5 items considered more valuable than the “common” items, which are often worthless duplicates.³¹
 6 Knowing this, Supercell and other game developers “manufacture rarity (also known as ‘artificial
 7 scarcity’) to increase the value of the assets they are selling.”³²

8 88. Supercell admits its Loot Boxes provide the chance to hit the big time by winning
 9 valuable items. For instance, on its website, Supercell states these in-game purchases “can be used
 10 to enhance certain gameplay elements.”³³

CLASS ACTION ALLEGATIONS

12 89. Pursuant to Federal Rule of Civil Procedure 23, Plaintiff seeks certification of a
 13 nationwide class consisting of:

14 All persons who paid to receive randomized virtual items from a purchase (also
 15 known as “Loot Boxes”) within Supercell’s Clash Royale or Brawl Stars video
 16 games.

17 90. The Class excludes Defendant’s officers and directors, current or former employees,
 18 including their immediate family members, as well as any judge, justice or judicial officer presiding
 19 over this matter and members of their immediate families and judicial staff. Plaintiff reserves the
 20 right to amend the Class definition or include subclasses if discovery and further investigation reveal
 21 that the Class should be expanded or otherwise modified.

23 30 Vili Lehdonvirta, *Virtual item sales as a revenue model: identifying attributes that drive*
 24 *purchase decisions*, Electron Commer Res, 9:97-113 (2009).

25 31 Mittone L, Savadori L, “The Scarcity Bias,” *Applied Psychology*. 58(3): 453-468 (2009).

26 32 Vili Lehdonvirta, *Virtual item sales as a revenue model: identifying attributes that drive*
 27 *purchase decisions*, Electron Commer Res, 9:97-113 (2009) (“Rarity is perhaps the most socially
 28 oriented attribute of virtual goods, because its value is strongly associated with its ability to
 distinguish a (small) group of owners from non-owners.”)

33 <https://supercell.com/en/parents/>

1 91. Plaintiff's claims are typical of the claims of the members of the Class, because
 2 Plaintiff and all other members of the Class were damaged by the same wrongful conduct committed
 3 by Defendant, as alleged more fully herein.

4 92. Plaintiff will fairly and adequately protect the interests of the Class. The interests of
 5 the class representatives are coincident with, and not antagonistic to, the interests of the other
 6 members of the Class.

7 93. Plaintiff has retained counsel competent and experienced in the prosecution of class
 8 action litigation.

9 94. Questions of law and fact common to the members of the Class are central here and
 10 predominate over questions that may affect only individual members. Among the questions of law
 11 and fact common to the Class are:

12 (a) Whether Defendant's games containing Loot Boxes and similar mechanisms
 13 create and/or exacerbate addictive behaviors in its players;

14 (b) Whether Defendant's games containing Loot Boxes and similar mechanisms
 15 exploit addictive behaviors in its players;

16 (c) Whether Defendant's games containing Loot Boxes and similar mechanisms
 17 constitute gambling or create a gambling device under California law and in violation of Cal Penal
 18 Code §§ 330, *et seq.*;

19 (d) Whether Defendant's games containing Loot Boxes and similar mechanisms
 20 violate the Illegal Gambling Business Act (18 U.S.C. § 1955), and the Unlawful Internet Gambling
 21 Enforcement Act of 2006 (31 U.S.C. §§ 5361-5367);

22 (e) Whether Defendant violated Business & Professions Code § 17200 by
 23 engaging in an "unlawful" business practice by marketing, selling and distributing videogames with
 24 gambling features and in violation of various state and federal laws as set forth herein;

25 (f) Whether Defendant violated Business & Professions Code § 17200 by
 26 engaging in an "unfair" business practice by marketing, selling and distributing videogames with
 27 gambling features and that create and/or exacerbate addictive behaviors as alleged herein;

28 (g) Whether Defendant violated Civil Code §§ 1770(a)(14);

(h) Whether Defendant was unjustly enriched as a result of the conduct alleged herein;

(i) Whether Defendant's conduct violated the other provisions of statutory and common law outlined in this Complaint.

95. A class action is superior to all other available means for the fair and efficient adjudication of this controversy. Individualized litigation would create the danger of inconsistent or contradictory judgments arising from the same set of facts. Individualized litigation would also increase the delay and expense to all parties and the court system from the issues raised by this action. The burden and expense that would be entailed by individual litigation makes it impracticable or impossible for Class members to prosecute their claims individually. Further, the adjudication of this action presents no unusual management difficulties.

96. Unless a class is certified, Defendant will retain monies received as a result of its improper conduct. Unless a classwide injunction is issued, Defendant will continue to commit the violations alleged, and will continue to promote and engage in the unfair and unlawful gambling activities discussed herein. Defendant has acted or refused to act on grounds that are generally applicable to the Class so that injunctive and declaratory relief is appropriate to the Class as a whole.

FIRST CAUSE OF ACTION

Unlawful and Unfair Business Practices in Violation of California’s Unfair Competition Law (“UCL”) (Cal. Bus. & Prof. Code §§ 17200, *et seq.*)

97. Plaintiff realleges and incorporates by reference the allegations set forth in each of the preceding paragraphs of this Complaint.

98. Plaintiff and Defendant are “persons” within the meaning of the UCL. Cal. Bus. & Prof. Code § 17201.

99. The UCL defines unfair competition to include any “unlawful, unfair or fraudulent business act or practice.” Cal. Bus. Prof. Code § 17200.

100. By committing the acts and practices alleged herein, Defendant has engaged in unlawful and unfair business practices in violation of the UCL.

1 101. Unlawful Conduct: As a result of engaging in the conduct alleged in this Complaint,
2 Defendant has violated the UCL's proscription against engaging in unlawful conduct by virtue of
3 its violation of California's gambling laws, its violation of Federal gambling laws, and its violations
4 of the California Civil Code §§ 1710 and 1711, as well as the Consumers Legal Remedies Act,
5 California Civil Code § 1770(a)(14).

6 102. More specifically, Defendant has violated the UCL's proscription against engaging
7 in "unlawful" business practices by virtue of its conduct in violation of California Business &
8 Professions Code §§ 19800, *et seq.*, California Penal Code §§ 330, *et seq.*, the Illegal Gambling
9 Business Act (18 U.S.C. § 1955), and the Unlawful Internet Gambling Enforcement Act of 2006
10 (31 U.S.C. §§ 5361-5367) as set forth herein. Plaintiff reserves the right to allege other violations
11 of law, which constitute other unlawful business acts or practices. Such conduct is ongoing and
12 continues to this date.

13 103. Unfair Conduct: In the course of conducting business, Defendant has violated the
14 UCL's proscription against "unfair" business practices by, among other things:

15 (a) Engaging in the conduct alleged in this Complaint, which is illegal and also
16 violates legislatively-declared policies articulated in, *inter alia*, California Business & Professions
17 Code §§ 19800, *et seq.*, California Penal Code §§ 330, *et seq.*, the Illegal Gambling Business Act
18 (18 U.S.C. § 1955), and the Unlawful Internet Gambling Enforcement Act of 2006 (31 U.S.C.
19 §§ 5361-5367) by conducting illegal and unlicensed gambling business including at places not
20 suitable for gambling activities, knowingly accepting payments from those who participated in
21 Defendant's unlawful Internet gambling, and promoting predatory gambling as entertainment for
22 children and families;

23 (b) Intentionally profiting from conduct designed to create and/or exploit
24 addictive tendencies in vulnerable minors and adults alike; and,

25 (c) Omitting important information and misleading minors, their parents, and
26 adult gamers concerning the addictive, costly and random chance nature of the Loot Box mechanism
27 and its use in Defendant's games.

1 104. Defendant has also violated the UCL's proscription against unfair conduct as a result
 2 of engaging in the conduct alleged in this Complaint, which violates legislatively-declared policies
 3 articulated in, *inter alia*, California Civil Code §§ 1710, 1711, and 1770(a)(14).

4 105. There is no societal benefit from Defendant's conduct which includes promoting
 5 addictive gambling as entertainment for children and families. There is only harm from Defendant's
 6 conduct. While Plaintiff was harmed, Defendant was unjustly enriched by its deceptive, predatory
 7 and harmful conduct. As a result, Defendant's conduct is "unfair," as it offended an established
 8 public policy. Further, Defendant engaged in immoral, unethical, oppressive, and unscrupulous
 9 activities that are substantially injurious to consumers as the gravity of Defendant's conduct
 10 outweighs any alleged benefits attributable to such conduct.

11 106. There were reasonably available alternatives to further Defendant's legitimate
 12 business interests, other than the conduct described herein.

13 107. Defendant's violations of the UCL continue to this day. As a direct and proximate
 14 result of Defendant's violations of the UCL, Plaintiff and members of the Class have suffered actual
 15 damage by spending money on illegal Loot Boxes and other gambling mechanisms, and subjecting
 16 themselves to the unlawful, exploitative games as alleged herein.

17 108. Unless restrained and enjoined, Defendant will continue to engage in the unlawful
 18 and unfair conduct described herein.

19 109. Pursuant to Section 17203 of the UCL, Plaintiff and the Class seek an order that
 20 requires Defendant: (a) to remove Loot Boxes from any of its games; (b) to provide Class members
 21 with restitution for moneys paid to purchase Loot Boxes; (c) to otherwise make full restitution of
 22 all moneys wrongfully obtained from its violations of the UCL, as alleged in this Complaint; and
 23 (d) to pay the attorney fees and costs incurred by counsel for Plaintiff and the proposed class,
 24 including in accordance with California Code of Civil Procedure § 1021.5.

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SECOND CAUSE OF ACTION

Violation of the Consumers Legal Remedies Act (“CLRA”) (Cal. Civ. Code §§ 1750, *et seq.*)

110. Plaintiff realleges and incorporates by reference the allegations set forth in each of the preceding paragraphs of this Complaint.

111. This claim for relief is brought pursuant to the CLRA. Plaintiff and members of the class are “consumers,” as that term is defined by Civil Code § 1761(d), because they spent money on Defendant’s videogame Loot Boxes for personal, family, or household purposes.

112. The conduct alleged in this Complaint constitutes unfair methods of competition and unfair and deceptive acts and practices for the purposes of the CLRA, and were undertaken by Defendant in transactions intended to result in, and which resulted in, the sale of goods or services to consumers; namely, the sale of Loot Boxes or similar gambling mechanisms.

113. By engaging in the conduct described herein, Defendant has violated subdivision (a)(14) of California Civil Code § 1770 by,

(14) Representing that a transaction confers or involves rights, remedies, or obligations that it does not have or involve, or that are prohibited by law.

114. Defendant violated the CLRA by offering to sell and selling Loot Boxes to Plaintiff and the Class Members when in fact these Loot Boxes constitute illegal gambling transactions prohibited by law.

115. Defendant's violations of the CLRA proximately caused injury in fact to Plaintiff and the Class.

116. Plaintiff and the Class members transacted with Defendant on the belief that the transactions were lawful. Indeed, a reasonable consumer believes in the lawfulness of his or her transactions.

117. Pursuant to Cal. Civ. Code § 1782(d), Plaintiff, individually and on behalf of the other members of the Class, seeks a Court order enjoining the above-described wrongful acts and practices of Defendant and for restitution and disgorgement.

118. Pursuant to Cal. Civ. Code § 1782(a), Defendant was notified in writing by certified mail of the particular violations of Section 1770 of the CLRA, which notification demanded that Defendant rectify the problems associated with the actions detailed above and give notice to all affected consumers of Defendant's intent to so act. A copy of the letter is attached as Exhibit A.

119. If Defendant fails to rectify or agree to rectify the problems associated with the actions detailed above and give notice to all affected consumers within 30 days of the date of written notice pursuant to §1782 of the Act, Plaintiff will amend this Complaint to add claims for actual, punitive and statutory damages, as appropriate.

120. Defendant's conduct is fraudulent, wanton, and malicious.

121. Pursuant to §1780(d) of the Act, attached hereto as Exhibit B is the affidavit showing that this action has been commenced in the proper forum.

THIRD CAUSE OF ACTION

Unjust Enrichment

122. Plaintiff realleges and incorporates by reference the allegations set forth in each of the preceding paragraphs of this Complaint.

123. By its wrongful acts and omissions, Defendant was unjustly enriched at the expense of and to the detriment of Plaintiff and the Class. Defendant was unjustly enriched as a result of the compensation it received from the marketing and sale of the unlawful and unfair Loot Boxes to Plaintiff and the members of the Class.

124. Plaintiff and the Class seek restitution from Defendant and seek an order of this Court disgorging all profits, benefits, and other compensation obtained by Defendant from its wrongful conduct.

125. Plaintiff and the Class have no adequate remedy at law.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff, on behalf of himself and all others similarly situated, prays for relief in this Complaint as follows:

(a) For an order certifying the Class as requested herein;

- (b) For restitution and disgorgement of the revenues wrongfully retained as a result of Defendant's wrongful conduct;
- (c) For declaratory and injunctive relief as permitted by law or equity, including enjoining Defendant from continuing the unlawful practices as set forth herein;
- (d) For an award of attorney fees, where applicable;
- (e) For an award of costs; and
- (f) For any and all other relief the Court deems just and appropriate.

DEMAND FOR JURY TRIAL

Based on the foregoing, Plaintiff, on behalf of himself, and all others similarly situated, hereby demands a jury trial for all claims so triable.

Respectfully submitted,

Dated: August 11, 2020

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